This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) A prostaglandin F2 receptor antagonist ~~comprising~~ consisting essentially of an amino acid sequence derived from the second extracellular loop of a prostaglandin F2 receptor, said amino acid sequence comprising one or more sequences selected from the group consisting of ~~ILGHRDYK~~ ilghrdyk (PCP-8; SEQ ID NO:1); ILGHRDYK (PCP-13; SEQ ID NO:13); ILAHRDYK (PCP-13.7, SEQ ID NO:4); ILGFRDYK (PCP-13.11; SEQ ID NO:5); ILGHKDYK (PCP-13.13; SEQ ID NO:6); ILGHRNYK (PCP-13.14; SEQ ID NO:7); ILGHQDYK (PCP-13.18; SEQ ID NO:8); ILGHRDY-amide (PCP-13.20; SEQ ID NO:9); ILGHRDYK-amide (PCP-13.21; SEQ ID NO:15); ILGWRDYK (PCP-13.22; SEQ ID NO:10); ILaHRDYK (PCP-13.8; SEQ ID NO:14); and ILGXRDYK (PCP-13.24; SEQ ID NO:11), wherein X is cyclohexyl alanine, and ~~provided that the antagonist is not native prostaglandin F2 receptor~~wherein small letters indicate L-amino acids and capital letters indicated D-amino acids.

2. (Currently amended) A peptide consisting essentially of ~~an amino acid~~ a variant sequence ~~selected from the group consisting~~ of any one of SEQ ID NOs:1 [[and 4]] to 11, 13, 14, or 15 in which one or more amino acid residues are substituted or deleted, and wherein said variant ~~amino acid~~ sequence contains L- and/or D-amino acids and ~~the amino acid sequence has about 88 % homology to SEQ ID NOs: 1 and 4 to 11,~~ wherein said peptide is a prostaglandin F2 receptor antagonist.

3. (Previously presented) A method for reducing the occurrence of premature delivery of fetus, which comprises the step of administering to a female in need of such treatment a therapeutically effective amount of the antagonist of claim 1.

4. (Previously presented) A method for reducing the occurrence of and/or treating dysmenorrhea comprising the step of administering to a female in need of such treatment a therapeutically effective amount of the antagonist of claim 1.

5. (Previously presented) A pharmaceutical composition comprising at least one antagonist of claim 1, and a pharmaceutically acceptable carrier.

6. (withdrawn) A method for determining activity of a compound of claim 1 as a G protein-coupled receptor antagonist capable of binding to the extracellular elements of the said receptor, comprising the steps of:

a) culturing cells which express said receptor or identifying animal tissues *ex vivo* or *in vivo* where physiological consequences are dependent on said receptor;

b) contacting said cells or tissues with said compound at a concentration of $10^{-10}$ M to $10^{-3}$ M to be tested for antagonist activity at said receptor; and

c) measuring a response to alter the transduction of a signal resulting in physiological consequences selected from the group consisting of increments in cell calcium, phosphoinositide hydrolysis, increased/decreased cellular cyclic adenosine monophosphate, cell growth and/or differentiation, altered gene expression, and smooth muscle contraction or dilation.

7. (withdrawn) A method for determining activity of a compound of claim 1 as a prostaglandin $F_2$ alpha receptor antagonist capable of binding to the extracellular elements of the said receptor, comprising the steps of:

a) culturing cells which express said receptor or identifying animal tissues *ex vivo* or *in vivo* where physiological consequences are dependent on said receptor;

b) contacting said cells or tissues with said compound at a concentration of $10^{-10}$ M to $10^{-3}$ M to be tested for antagonist activity at said receptor; and

c) measuring a response to alter the transduction of a signal resulting in physiological consequences selected from the group consisting of increments in cell calcium, phosphoinositide hydrolysis, cell growth and/or differentiation, altered gene expression, and smooth muscle contraction or dilation.

8-9. (cancelled).

10. (Previously presented) A method for reducing uterine contraction comprising the step of administering to a female in need of such treatment a therapeutically effective amount of the antagonist of claim 1.